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RAW SEQUENCE LISTING
PATENT APPLICATION *US/08/476,798*

AU 1804

DATE: 03/26/96
TIME: 17:57:25

INPUT SET: S9549.raw

> **This Raw Listing contains the General Information Section and up to the first 5 pages.**

```
 1                              SEQUENCE LISTING
 2
 3    (1)     General Information:
 4
 5        (i) APPLICANT: Deboer, Herman A.          ENTERED
 6                       Strijker, Rein
 7                       Heyneker, Herbert L.
 8                       Platenburg, Gerald
 9                       Lee, Sang He
10                       Pieper, Frank
11                       Krimpenfort, Paul J.A.
12
13       (ii) TITLE OF INVENTION: Production of Recombinant Polypeptides
14            by Bovine Species and Transgenic Methods
15
16      (iii) NUMBER OF SEQUENCES: 38
17
18       (iv) CORRESPONDENCE ADDRESS:
19            (A) ADDRESSEE: Townsend and Townsend and Crew
20            (B) STREET: One Market Plaza, Steuart Tower, Suite 2000
21            (C) CITY: San Francisco
22            (D) STATE: California
23            (E) COUNTRY: USA
24            (F) ZIP: 94105
25
26        (v) COMPUTER READABLE FORM:
27            (A) MEDIUM TYPE: Floppy disk
28            (B) COMPUTER: IBM PC compatible
29            (C) OPERATING SYSTEM: PC-DOS/MS-DOS
30            (D) SOFTWARE: PatentIn Release #1.0, Version #1.25
31
32       (vi) CURRENT APPLICATION DATA:
33            (A) APPLICATION NUMBER: US 08/476,798
34            (B) FILING DATE: 07-JUN-1995
35            (C) CLASSIFICATION:
36
37      (vii) PRIOR APPLICATION DATA:
38            (A) APPLICATION NUMBER: US 08/077,788
39            (B) FILING DATE: 15-JUN-1993
40
41      (vii) PRIOR APPLICATION DATA:
42            (A) APPLICATION NUMBER: US 07/895,956
43            (B) FILING DATE: 15-JUN-1992
44
45      (vii) PRIOR APPLICATION DATA:
46            (A) APPLICATION NUMBER: US 07/619,131
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RAW SEQUENCE LISTING
PATENT APPLICATION *US/08/476,798*

DATE: 03/26/96
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INPUT SET: S9549.raw

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47              (B) FILING DATE: 27-NOV-1990
48
49         (vii) PRIOR APPLICATION DATA:
50              (A) APPLICATION NUMBER: US 07/444,745
51              (B) FILING DATE: 01-DEC-1989
52
53        (viii) ATTORNEY/AGENT INFORMATION:
54              (A) NAME: Liebescheutz, Joe O.
55              (B) REGISTRATION NUMBER: 37,505
56              (C) REFERENCE/DOCKET NUMBER: 16994-003125
57
58          (ix) TELECOMMUNICATION INFORMATION:
59              (A) TELEPHONE: 415-543-9600
60              (B) TELEFAX: 415-543-5043
61
62
63    (2) INFORMATION FOR SEQ ID NO:1:
64
65         (i) SEQUENCE CHARACTERISTICS:
66              (A) LENGTH: 2319 base pairs
67              (B) TYPE: nucleic acid
68              (C) STRANDEDNESS: single
69              (D) TOPOLOGY: linear
70
71        (ii) MOLECULE TYPE: DNA (genomic)
72
73
74        (ix) FEATURE:
75              (A) NAME/KEY: sig_peptide
76              (B) LOCATION: 1..54
77
78        (ix) FEATURE:
79              (A) NAME/KEY: mat_peptide
80              (B) LOCATION: 55..2130
81
82        (ix) FEATURE:
83              (A) NAME/KEY: CDS
84              (B) LOCATION: 1..2130
85
86
87        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:
88
89    GGA CTT GTC TTC CTC GTC CTG CTG TTC CTC GGG GCC CTC GGA CTG TGT      48
90    Gly Leu Val Phe Leu Val Leu Leu Phe Leu Gly Ala Leu Gly Leu Cys
91    -18          -15                 -10                 -5
92
93    CTG GCT GGC CGT AGG AGA AGG AGT GTT CAG TGG TGC GCC GTA TCC CAA      96
94    Leu Ala Gly Arg Arg Arg Arg Ser Val Gln Trp Cys Ala Val Ser Gln
95            1               5                       10
96
97    CCC GAG GCC ACA AAA TGC TTC CAA TGG CAA AGG AAT ATG AGA AAA GTG     144
98    Pro Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val
99     15                  20                  25                  30
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100
101   CTG GGC CCT CCT GTC AGC TGC ATA AAG AGA GAC TCC CCC ATC CAG TGT          192
102   Leu Gly Pro Pro Val Ser Cys Ile Lys Arg Asp Ser Pro Ile Gln Cys
103                       35                  40                  45
104
105   ATC CAG GCC ATT GCG GAA AAC AGG GCC GAT GCT GTG ACC CTT GAT GGT          240
106   Ile Gln Ala Ile Ala Glu Asn Arg Ala Asp Ala Val Thr Leu Asp Gly
107               50                  55                  60
108
109   GGT TTC ATA TAC GAG GCA GGC CTG GCC CCC TAC AAA CTG CGA CCT GTA          288
110   Gly Phe Ile Tyr Glu Ala Gly Leu Ala Pro Tyr Lys Leu Arg Pro Val
111           65                  70                  75
112
113   GCG GCG GAA GTC TAC GGG ACC GAA AGA CAG CCA CGA ACT CAC TAT TAT          336
114   Ala Ala Glu Val Tyr Gly Thr Glu Arg Gln Pro Arg Thr His Tyr Tyr
115           80                  85                  90
116
117   CGG GTG GCT GTG GTG AAG AAG GGC GGC AGC TTT CAG CTG AAC GAA CTG          384
118   Arg Val Ala Val Val Lys Lys Gly Gly Ser Phe Gln Leu Asn Glu Leu
119   95                  100                 105                 110
120
121   CAA GGT CTG AAG TCC TGC CAC ACA GGC CTT CGC AGG ACC GCT GGA TGG          432
122   Gln Gly Leu Lys Ser Cys His Thr Gly Leu Arg Arg Thr Ala Gly Trp
123                   115                 120                 125
124
125   AAT GTC CCT ACA GGG ACA CTT CGT CCA TTC TTG AAT TGG ACG GGT CCA          480
126   Asn Val Pro Thr Gly Thr Leu Arg Pro Phe Leu Asn Trp Thr Gly Pro
127                   130                 135                 140
128
129   CCT GAG CCC ATT GAG GCA GCT GTG CAG TTC TTC TCA GCC AGC TGT GTT          528
130   Pro Glu Pro Ile Glu Ala Ala Val Gln Phe Phe Ser Ala Ser Cys Val
131               145                 150                 155
132
133   CCC GGT GCA GAT AAA GGA CAG TTC CCC AAC CTG TGT CGC CTG TGT GCG          576
134   Pro Gly Ala Asp Lys Gly Gln Phe Pro Asn Leu Cys Arg Leu Cys Ala
135       160                 165                 170
136
137   GGG ACA GGG GAA AAC AAA TGT GCC TTC TCC TCC CAG GAA CCG TAC TTC          624
138   Gly Thr Gly Glu Asn Lys Cys Ala Phe Ser Ser Gln Glu Pro Tyr Phe
139   175                 180                 185                 190
140
141   AGC TAC TCT GGT GCC TTC AAG TGT CTG AGA GAC GGG GCT GGA GAC GTG          672
142   Ser Tyr Ser Gly Ala Phe Lys Cys Leu Arg Asp Gly Ala Gly Asp Val
143                   195                 200                 205
144
145   GCT TTT ATC AGA GAG AGC ACA GTG TTT GAG GAC CTG TCA GAC GAG GCT          720
146   Ala Phe Ile Arg Glu Ser Thr Val Phe Glu Asp Leu Ser Asp Glu Ala
147                   210                 215                 220
148
149   GAA AGG GAC GAG TAT GAG TTA CTC TGC CCA GAC AAC ACT CGG AAG CCA          768
150   Glu Arg Asp Glu Tyr Glu Leu Leu Cys Pro Asp Asn Thr Arg Lys Pro
151                   225                 230                 235
152
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INPUT SET: S9549.raw

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153    GTG GAC AAG TTC AAA GAC TGC CAT CTG GCC CGG GTC CCT TCT CAT GCC        816
154    Val Asp Lys Phe Lys Asp Cys His Leu Ala Arg Val Pro Ser His Ala
155        240             245                 250
156

157    GTT GTG GCA CGA AGT GTG AAT GGC AAG GAG GAT GCC ATC TGG AAT CTT        864
158    Val Val Ala Arg Ser Val Asn Gly Lys Glu Asp Ala Ile Trp Asn Leu
159    255             260                 265                 270
160

161    CTC CGC CAG GCA CAG GAA AAG TTT GGA AAG GAC AAG TCA CCG AAA TTC        912
162    Leu Arg Gln Ala Gln Glu Lys Phe Gly Lys Asp Lys Ser Pro Lys Phe
163                275             280                 285
164

165    CAG CTC TTT GGC TCC CCT AGT GGG CAG AAA GAT CTG CTG TTC AAG GAC        960
166    Gln Leu Phe Gly Ser Pro Ser Gly Gln Lys Asp Leu Leu Phe Lys Asp
167            290             295                 300
168

169    TCT GCC ATT GGG TTT TCG AGG GTG CCC CCG AGG ATA GAT TCT GGG CTG       1008
170    Ser Ala Ile Gly Phe Ser Arg Val Pro Pro Arg Ile Asp Ser Gly Leu
171            305             310                 315
172

173    TAC CTT GGC TCC GGC TAC TTC ACT GCC ATC CAG AAC TTG AGG AAA AGT       1056
174    Tyr Leu Gly Ser Gly Tyr Phe Thr Ala Ile Gln Asn Leu Arg Lys Ser
175        320             325                 330
176

177    GAG GAG GAA GTG GCT GCC CGG CGT GCG CGG GTC GTG TGG TGT GCG GTG       1104
178    Glu Glu Glu Val Ala Ala Arg Arg Ala Arg Val Val Trp Cys Ala Val
179    335             340                 345                 350
180

181    GGC GAG CAG GAG CTG CGC AAG TGT AAC CAG TGG AGT GGC TTG AGC GAA       1152
182    Gly Glu Gln Glu Leu Arg Lys Cys Asn Gln Trp Ser Gly Leu Ser Glu
183                355             360                 365
184

185    GGC AGC GTG ACC TGC TCC TCG GCC TCC ACC ACA GAG GAC TGC ATC GCC       1200
186    Gly Ser Val Thr Cys Ser Ser Ala Ser Thr Thr Glu Asp Cys Ile Ala
187            370             375                 380
188

189    CTG GTG CTG AAA GGA GAA GCT GAT GCC ATG AGT TTG GAT GGA GGA TAT       1248
190    Leu Val Leu Lys Gly Glu Ala Asp Ala Met Ser Leu Asp Gly Gly Tyr
191            385             390                 395
192

193    GTG TAC ACT GCA TGC AAA TGT GGT TTG GTG CCT GTC CTG GCA GAG AAC       1296
194    Val Tyr Thr Ala Cys Lys Cys Gly Leu Val Pro Val Leu Ala Glu Asn
195        400             405                 410
196

197    TAC AAA TCC CAA CAA AGC AGT GAC CCT GAT CCT AAC TGT GTG GAT AGA       1344
198    Tyr Lys Ser Gln Gln Ser Ser Asp Pro Asp Pro Asn Cys Val Asp Arg
199    415             420                 425                 430
200

201    CCT GTG GAA GGA TAT CTT GCT GTG GCG GTG GTT AGG AGA TCA GAC ACT       1392
202    Pro Val Glu Gly Tyr Leu Ala Val Ala Val Val Arg Arg Ser Asp Thr
203                435             440                 445
204

205    AGC CTT ACC TGG AAC TCT GTG AAA GGC AAG AAG TCC TGC CAC ACC GCC       1440
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INPUT SET: S9549.raw

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206  Ser Leu Thr Trp Asn Ser Val Lys Gly Lys Lys Ser Cys His Thr Ala
207              450                 455             460
208

209  GTG GAC AGG ACT GCA GGC TGG AAT ATC CCC ATG GGC CTG CTC TTC AAC     1488
210  Val Asp Arg Thr Ala Gly Trp Asn Ile Pro Met Gly Leu Leu Phe Asn
211          465                 470                 475
212

213  CAG ACG GGC TCC TGC AAA TTT GAT GAA TAT TTC AGT CAA AGC TGT GCC     1536
214  Gln Thr Gly Ser Cys Lys Phe Asp Glu Tyr Phe Ser Gln Ser Cys Ala
215          480                 485                 490
216

217  CCT GGG TCT GAC CCG AGA TCT AAT CTC TGT GCT CTG TGT ATT GGC GAC     1584
218  Pro Gly Ser Asp Pro Arg Ser Asn Leu Cys Ala Leu Cys Ile Gly Asp
219  495                 500                 505                 510
220

221  GAG CAG GGT GAG AAT AAG TGC GTG CCC AAC AGC AAT GAG AGA TAC TAC     1632
222  Glu Gln Gly Glu Asn Lys Cys Val Pro Asn Ser Asn Glu Arg Tyr Tyr
223                  515                 520                 525
224

225  GGC TAC ACT GGG GCT TTC CGG TGC CTG GCT GAG AAT GCT GGA GAC GTT     1680
226  Gly Tyr Thr Gly Ala Phe Arg Cys Leu Ala Glu Asn Ala Gly Asp Val
227              530                 535                 540
228

229  GCA TTT GTG AAA GAT GTC ACT GTC TTG CAG AAC ACT GAT GGA AAT AAC     1728
230  Ala Phe Val Lys Asp Val Thr Val Leu Gln Asn Thr Asp Gly Asn Asn
231          545                 550                 555
232

233  AAT GAG GCA TGG GCT AAG GAT TTG AAG CTG GCA GAC TTT GCG CTG CTG     1776
234  Asn Glu Ala Trp Ala Lys Asp Leu Lys Leu Ala Asp Phe Ala Leu Leu
235      560                 565                 570
236

237  TGC CTC GAT GGC AAA CGG AAG CCT GTG ACT GAG GCT AGA AGC TGC CAT     1824
238  Cys Leu Asp Gly Lys Arg Lys Pro Val Thr Glu Ala Arg Ser Cys His
239  575                 580                 585                 590
240

241  CTT GCC ATG GCC CCG AAT CAT GCC GTG GTG TCT CGG ATG GAT AAG GTG     1872
242  Leu Ala Met Ala Pro Asn His Ala Val Val Ser Arg Met Asp Lys Val
243                  595                 600                 605
244

245  GAA CGC CTG AAA CAG GTG CTG CTC CAC CAA CAG GCT AAA TTT GGG AGA     1920
246  Glu Arg Leu Lys Gln Val Leu Leu His Gln Gln Ala Lys Phe Gly Arg
247              610                 615                 620
248

249  AAT GGA TCT GAC TGC CCG GAC AAG TTT TGC TTA TTC CAG TCT GAA ACC     1968
250  Asn Gly Ser Asp Cys Pro Asp Lys Phe Cys Leu Phe Gln Ser Glu Thr
251          625                 630                 635
252

253  AAA AAC CTT CTG TTC AAT GAC AAC ACT GAG TGT CTG GCC AGA CTC CAT     2016
254  Lys Asn Leu Leu Phe Asn Asp Asn Thr Glu Cys Leu Ala Arg Leu His
255      640                 645                 650
256

257  GGC AAA ACA ACA TAT GAA AAA TAT TTG GGA CCA CAG TAT GTC GCA GGC     2064
258  Gly Lys Thr Thr Tyr Glu Lys Tyr Leu Gly Pro Gln Tyr Val Ala Gly
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SEQUENCE VERIFICATION REPORT
PATENT APPLICATION   *US/08/476,798*

DATE: 03/26/96
TIME: 17:57:39

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